

Vegetation of a glacial plunge basin.—In certain rock basins of glacial origin near Syracuse, New York, low soil and air temperatures prevail throughout the year, the difference between the rim and bottom of the depressions often amounting to 30° F. These temperature depressions have been shown by PETRY²⁹ to be the controlling factors in the development of plant associations characterized by distinctly northern species, such as *Cornus canadensis*, *Pyrola asarifolia*, *Coptis trifolia*, and *Ribes lacustre*, whose local distribution coincide exactly with areas of low soil and air temperature.—GEO. D. FULLER.

Geotropism and phototropism.—VAN AMEIJDEN³⁰ finds that neither geoperception nor photo-perception or reaction occurs in the seedlings of *Avena sativa* or *Sinapis alba* in complete absence of oxygen. Contrary to CORRENS and KENKEL, he finds that, on complete or partial withdrawal of oxygen, the reaction of seedlings to a geotropic stimulus does not differ from their reaction to a phototropic stimulus.—WM. CROCKER.

Rusts of Costa Rica.—ARTHUR³¹ has studied the rusts of Costa Rica based chiefly upon collections made by HOLWAY, and this first presentation of Costa Rican rusts includes 118 species, 22 of which are described as new, and 12 others are new to North America. The indications are that the rust flora of Costa Rica will be found to be of exceptional richness and importance.—J. M. C.

Aquilegia.—PAYSON³² has published a revision of the North American species of *Aquilegia*. In addition to the keys, descriptions, and discussions, there is an unusually full list of stations. He recognizes 25 species, 3 of which are described as new, and also 9 subspecies or varieties, 2 of which are new.—J. M. C.

New African plants.—MOORE,³³ in connection with his studies of African Compositae, has described a new genera (*Emiliella*) of the Senecionidae and 8 new species of *Senecio*.—J. M. C.

²⁹ PETRY, LOREN C., Studies of the vegetation of New York State. II. The vegetation of a glacial plunge basin and its relation to temperature. Bull. Torr. Bot. Club 45:203-210. 1918.

³⁰ VAN AMEIJDEN, U. P., Geotropism and phototropism in the absence of free oxygen. Recueil Trav. Bot. Neerl. 14:149-218. pls. 15-19. fig. 1. 1917.

³¹ ARTHUR, J. C., Uredinales of Costa Rica based on collection by E. W. D. HOLWAY. Mycologia 10:111-154. 1918.

³² PAYSON, EDWIN BLAKE, The North American species of *Aquilegia*. Contrib. U.S. Nat. Herb. 20:133-157. pls. 8-14. 1918.

³³ MOORE, SPENCER LEM., *Alabastra diversa*. Part XXIX. Jour. Botany 56: 225-233. 1918.